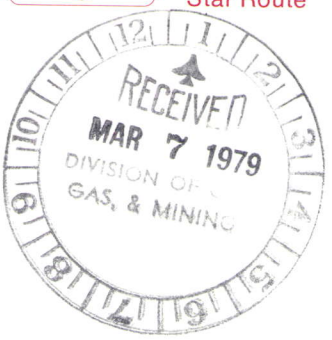
Route & file ACT/047/007

FERTILIZER AND
MINING DIVISION

Stauffer Chemical Company
Star Route / Randolph, Utah 84064 / Telephone (307) 877-3901



March 6, 1979

Mary Ann Wright
Reclamation Biologist
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Variances sought to Rule M-10 for the Vernal Phosphate Mine

Dear Ms. Wright:

Fred and I appreciate your stopping by the Vernal Operation on February 15, to discuss your January 15, 1979, memo to the Board of Oil, Gas, and Mining.

It appears that Stauffer and the State of Utah are quite close to developing an acceptable mined-land reclamation plan for the Vernal Operation. It appears that the basic problem lies in being able to pin-point the exact interpretation of the M-10 Standards and in defining exactly what is to be expected under each of the subsections. As you and Ron are aware, Stauffer wants to obtain an approved reclamation plan that is reasonable and, more importantly, not subject to change or open to a different interpretation in the future. Open-ended or unreasonable reclamation demands placed on Stauffer by the State of Utah will adversely affect this operation's ability to compete in the western phosphate industry.

The following is in response to each of the categories discussed on your January 15, 1979, memo to the Board:

CATEGORY II

A. Rule M-10-2 (e)

As was pointed out in earlier correspondence, the entire Vernal property, with the exception of some of the deeper drainages, is mineralized and, eventually, will be mined. At the current rate of mining, the reserves will last in excess of 500 years. Also, the manner in which the property is developed is dictated by economics. Keeping these facts in mind, Stauffer will adequately berm (4' high berm) along the tops of the highwalls in the areas we feel will not be reactivated within a 50-100 year period.

Decant pipe is unacceptable - not long term solution

B. & H. Rule M-10-3 & 13

Stauffer will make the present tailings impoundment facility non-impounding by using the decant pipe that was initially incorporated into the dike.

Exactly what is meant by non-impounding still needs to be clarified. Perhaps the Division's hydrologist can shed some light on what is required at the next meeting, tentatively scheduled for March 13, 1979.

D. Rule M-10-5

Stauffer will install 4' high berms along the rims of all highwalls left at the mine upon final abandonment of the property.

G. Rule M-10-12

Abandoned roads, along with mine dumps and fills will be revegetated. Where a slick-rock surface is used as a travel surface (road), the road should be classified as a slick-rock surface and be exempted from having to be revegetated.

It is now Stauffer's understanding that the land does not have to be reclaimed to the same type of surrounding or with the same type of pre-existing vegetation. In light of this, Stauffer will, in good faith, try to establish 70% of the existing cover with variable species suitable for the post-mining use of the land which will be private rangeland. The attached sheet shows the type and density of cover in Deer Herd Unit 26, which covers the Vernal Phosphate Mine.

Stauffer is currently engaged in a cooperative revegetation research project with the Soil Conservation Service. In the fall of 1978, eleven test plots were established on one of the mine dumps. Numerous species of grasses, forbs, and shrubs were planted. It is Stauffer's intention to eventually amend the already submitted M R forms to reflect the results of this research project. Before the M R forms are amended, however, Stauffer will consult with the Division of Oil, Gas, and Mining for the purpose of arriving at a suitable revegetation program.

Annual revegetation reports will be submitted to the Division of Oil, Gas, and Mining once an approved revegetation program is adopted.

CATEGORY III

C. Rule M-10-4

Probably the best way to resolve Stauffer's concern over what is termed a stable slope is to have the Division of Oil, Gas, and Mining propose what they feel will be accepted as a stable slope for various applications such as: dumps, major gully fills where the fill is deep and/or narrow, tailings dikes, etc. Stauffer's contention is that the slopes at the Vernal Mine are stable at the angle of repose. Major gully fills, tailings dikes, etc. need to have angle of repose slopes. The mine dumps, however, will be rounded off to less than the angle of repose.

CATEGORY IV

E. & F. Rule M-10-7 & 8

A hydrologist with the Division of Oil, Gas, and Mining is scheduled to visit the Vernal Operation on March 13, 1979, to assess the restricted drainage conflict. Further discussion will take place at that time.

Sincerely,

Stauffer Chemical Company

Thomas J. Scheffel

Thomas J. Scheffel
Chief Engineer

TJS/jb

cc: D. L. King, Jr.
F. L. Riding

Table B-6

Composition of the Sparse Pinyon-Juniper Community of Deer Herd Unit 26 (Vernal)[a], (13)

	% surface cover	% cover composition[b]
Trees (81.1%)		
Juniperus osteosperma (Utah juniper)	7.7	81.1
Pinus edulis (two-needle pinyon pine)	trace	trace
Shrubs (4.2%)		
Artemisia tridentata (big sagebrush)	0.1	1.0
Opuntia spp. (prickly pear cactus spp.)	0.2	2.1
Gutierrezia sarothrae (snakeweed)	0.1	1.0
Atriplex confertifolia (shadscale)	trace	trace
Grasses (4.2%)		
Hilaria jamesii (galleta grass)	0.3	3.2
Oryzopsis hymenoides (Indian rice grass)	0.1	1.0
Sitanion hystrix (squirrel tail grass)	trace	trace
Stipa comata (needle-and-thread grass)	trace	trace
Forbs (19 + species)	1.0	10.5
Total	9.5	99.9

[a] From Coles and Pederson (1967).

[b] Calculated from percentage surface cover (absolute cover) data of Coles and Pederson (1967).

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Vernal Phosphate Mine
Site Vegetative Cover